BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants:	Curran et al.	Confirmation No.: 2326
Serial No.:	10/730,508	Group Art Unit: 2151
Filed:	December 8, 2003	Examiner: Glenford J. Madamba
Title:	DATA MOVEMENT MANAGEMENT SYSTEM AND METHOD FOR A STORAGE AREA NETWORK FILE SYSTEM EMPLOYING THE DATA MANAGEMENT APPLICATION PROGRAMMING INTERFACE	

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this correspondence is being transmitted electronically to: United States Patent and Trademark Office, Alexandria, VA 22313-1450 on October 6, 2008.

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Date of Signature: October 6, 2008

To: Hon. Commissioner for Patents
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REPLY BRIEF SUBMITTED UNDER 37 CFR § 41.41

Dear Sir:

This is a Reply Brief submitted in response to an Examiner's Answer dated August 6, 2008 based upon a Final rejection dated February 20, 2008. A response under 37 CFR § 1.116 was submitted on April 18, 2008. No Advisory Action was ever provided to the present Applicants. A Notice of Appeal was submitted by the Applicants on May 20, 2008. An Appeal brief was submitted on July 18, 2008. This Reply Brief, due on or before October 6, 2008, is thus seen to be timely submitted in response to the abovementioned Examiner's Answer.

Preliminarily, it is useful to layout the structure of the present document. Since an organized response to the Examiner's Answer is required in order to maximize its effectiveness for all readers concerned, the first portion of this Reply Brief is a listing of applicants claim 1. The second portion of this document is directed to that portion of the Examiner's Answer that sets forth specific counterarguments to Applicant's assertions. Lastly, the document ends with a conclusion of Applicants' position.

I. Sample Claim

1. A method of managing data movement, comprising:

having common access to data residing in one or more data storage units;

initiating a data management application (DM) in said environment;

assigning a node of said cluster as a coordinating node for managing data movement;

receiving an event by the coordinating node requesting movement of data;

posting a worker **thread** to one or more of the nodes to perform data movement in response to the event.

II. Response to Specific Issues

Issue #1: Sufficiency of the Affidavit

Issue #1: Applicants have submitted an affidavit under 37 CFR § 1.131.

Examiner's Answer #1: The Examiner has asserted that the affidavit is insufficient.

Applicant's Reply #1: The Examiner has failed to consider the fact that Applicants have indeed satisfactorily demonstrated the reason for the lack of specific documents. The Examiner fails to appreciate that the claimed invention is a software related method. The Examiner is applying rule interpretations that might have been appropriate for 19th century chemical processing where the end result is a precipitate at the bottom of a beaker. In the presently claimed method the

process results in bits being transferred under well-defined circumstances. The successful testing of the method is the discernment that the relevant bits have been transferred. As the Examiner should fully appreciate, no one ever actually sees these bit of magnetized regions on the (usually rotatable) medium. Yet, does not the Examiner believe that when he hit "ALT-File-Save," the bits representing his Answer were transferred to a disk? Did the examiner have to visually see these bits in order for him to believe they were there?

Furthermore, the details of the affidavit established that there are internal procedures used for testing code before it is deemed to be usable by a customer. Furthermore, these are rather exacting standards. This establishes that there are business records kept in accordance with the development and testing of software. The affidavit further establishes that the record with respect to the testing of this particular project were kept in accordance with these rules. It furthermore establishes that the results of those tests were to flag the code as being ready for customer use, should the marketing need arise. Remember that the release of code by the assignee of the present invention entails not just its mere release but also its subsequent support costs which, without an identified market, are hard to justify.

The Examiner in his Answer has asserted that the "Applicant is also required to disclose where in the disclosures of the documentation the claimed invention is generally disclosed." However, neither the statute nor the regulations make any such requirement of an applicant. Whether or not such a requirement is indicated in the MPEP is irrelevant. That document is intended as a guide the patent examining corps and cannot set forth requirements to be followed by applicants since the material in the MPEP has not in any way been vetted by any form of public review and comment process as is present and required in the establishment of the body of patent regulations.

Accordingly, it is Applicants' position that the affidavit is indeed sufficient and that there is a perfectly logical and justifiable reason why other supporting documentation was not otherwise supplied therewith.

Issue #2: Anticipation Rejection

Issue #2: Whether Claims 1- 20 are anticipated under 35 USC §102(e) based upon the published patent application of Moore et al.

Applicant's Reply #2:

At this point, it seems particularly relevant to discuss those comments of the Examiner that appear beginning on page 14 of the Examiner's Answer. This discussion is therefore seen to be within the general framework of a Reply Brief which is narrowly directed to those comments of the Examiner provided in the Answer.

It would appear that the Examiner has not fully understood the import of Applicants' arguments in several respects. With respect to the first recited claim element, namely, "establishing a processing environment in a cluster of nodes...," it was Applicants' intent to point out that the same claim element is not recited in the patent application of Moore et al. for the reasons that the cited application, **not simply includes, but requires** "two classes of nodes." (See page 16 of the Examiner's Answer.) No such limitation is present in the cited claims. For this reason, it is seen that applicants first recited claim element is in fact a broader than the teachings found in the cited patent application of Moore et al.; **being broader, it is in fact therefore different**. Being different, even though broader, removes it from attack under an anticipation ground of rejection.

On page 17 of the Examiner's Answer, the Examiner also makes much of the fact that Applicants have argued that the notion of a session node is not to be found within the four corners of the cited patent application to Moore et al. but that there is no recitation of a session node to be found within the broadest of the rejected claims. In this regard, the Examiner has misconstrued Applicants' purpose for pointing out this "difference." Applicants are aware that the specific language does not appear in the rejected claims. However, it is noted that there is a specific purpose in pointing out the fact that the present Applicants do **disclose and also claim** (in their dependent claims) the use of a "session node" which is used for the processing of DMAPI events. See Applicants' paragraph **[0010]**: "However, all data migration and recall is conducted through a single node called a session node." This is an aspect of DMAPI processing

but it also imposes limitations. In particular, a session node performs a subset of the functions of a metadata node which are related to handling DMAPI events as shown in step 138 of Moore et al. Session node handling is described in several prior patents (6,990,478; 7,024,582; 7,072,894; 7,111,291) assigned to the same assignee as the present invention. However, Moore et al. limit DMAPI event processing for a given file system to their metadata node which gives them the same problem that led the present inventors to the method described in the present application. The I/O requirements of handling DMAPI event processing is limited by the I/O capabilities of the session node or metadata node.

Accordingly, while it is still the case that Applicants' specification is unique in specifically mentioning the utilization of a session node, equivalent node functionality is apparently described in the application of Moore et al., but it results in the same problem that the present application was directed to solving.

With respect to the Examiner's comments beginning on page 18 of the Examiner's Answer, the Examiner has asserted that "the Office again remarks and points out with emphasis that '[a]pplicant's references to 'distinct events' and/or a 'single event being processed in a parallel fashion' are *nowhere* to be found in the particular argued limitation of claim 1.' " However, it is noted that the aspect of Applicants' claimed method relating to parallel processing is implied in the following language from claim 1: "posting a worker thread to **one or more** of the nodes to perform data movement in response to the event. It is clear that Applicants' recited method fully and completely embraces the notion that more than one node is going to perform the desired data movement in response to the event. In this regard, it is to be specifically noted that claim language in general is capable of describing certain characteristics of a method which are inherent thereto. The fact that a worker thread is posted to one or more nodes to perform data movement inherently describes a parallel process. **The fact that the word "parallel" does not appear in Applicant's broad claim 1 does not in any way negate the fact that parallel processes are inherently described**.

In his answer, the Examiner has asserted that "Moore's teachings and disclosures, as cited by the Office, are thus in accordance with the current language of the claim requirements." (See page 18 thereof.) If the Examiner is in fact correct that Applicants' broad claim 1 is not

inherently parallel in nature, then the Examiner's assertion that it is equivalent to the teachings found in the cited patent application to Moore et al., then the Examiner has impliedly admitted that the cited application does not indeed teach parallel processing for events of this nature. In this regard to sentence at the end of the previous paragraph is highly relevant.

With respect to the arguments appearing on pages 19-20 of the Examiners Answer, it is noted that the Examiner has cited several passages from the application of Moore et al. for the sole purpose of asserting that they do in fact disclose a "coordinating node." To whatever extent that may be true, **they do not disclose a "coordinating node for managing data movement**." The only purpose set forth in the passages quoted by the Examiner is for **recovery, not for data movement**. Applicants' broad claim 1 specifically indicates that the purpose of the coordinating node is for managing data movement. **Recovery is an entirely different function and a node whose purpose is related to recovery does not in any way function in the same manner as a node whose purpose is related to data movement.** They are both nodes but their functions are entirely different. Since recited the functionality is different, an anticipation rejection cannot be found to be sustained.

On page 20 of the Examiner's Answer the following paragraph is to be found:

> "Fourth, and in support of his argument that Moore does not teach the recited feature of 'receiving an *event* by the coordinating node...', Applicant remarks and notes as a 'reason for difference' that the cited patent application only discloses that 'the possible *DMAPI events'* are READ, WRITE, and TRUNCATE' and that this is not properly discloses the said claim limitation. The Office respectfully disagrees."

Applicant reiterates that **there is no event received by anything in the cited patent application that can be described as a coordinating node that performs a data movement function**. Anything that is found in the cited patent application that can be described as a coordinating node is dedicated to recovery operations, or to node cluster membership, not to the movement of data. Furthermore, anything that could be described as a coordinating node in the cited patent application, other than those nodes used for recovery purposes, are seen to be directed to handling node membership in various cluster configurations. Again, there is no relation to events being processed by a coordinating node relating to data movement. The events that are referred to in paragraphs **[0075]** through **[0077]** in the cited patent application are not

processed by coordinating nodes. Any references therein to a "leader node" is in fact directed to a node that only performs recovery and cluster membership operations. **The reference in these paragraphs to a leader node is not in any way whatsoever a reference to a node to which a DMAPI event is directed**. Furthermore, there is nothing in the language found within the cited paragraphs that teach, disclose, or remotely suggest any form of parallel processing.

In particular, it is noted that the Examiner cites the following language from the cited patent application: "The *DMAPI event* is queued 136 and subsequently processed 138 by DMAPI 90 and HSM 88." There is absolutely nothing here which suggests that anything other than normal DMAPI processing occurs. In this regard, it should be fully appreciated by the Examiner that, in many respects, the present invention is directed to an improvement in the simple processing set forth in step 138 of the cited patent application. This improvement is particularly set forth in the last recited step of Applicants' claim 1.

Most Significant Difference

Primarily for the purpose of focusing attention on what is currently perceived as being the most relevant one of the Applicants' arguments, this section has been labeled as "most significant difference." Because of its relevance and significance, the language which is being compared is set off between lines of boldface asterisks below. Attention is now directed to the following language found in the cited patent application to Moore et al., and heavily relied upon by the Examiner:

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> **[0103]**: "An RPC is a thread initiated on a node in response to a message from another node to act as a proxy for the requesting node."

The Examiner reads this language as being **equivalent** to the following language found in applicants claim 1:

> "...**posting a** worker **thread** to one or more of the nodes to perform data movement in response to the event."

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The cited language is nothing other than a definition of a Remote Procedure Call (RPC), nothing more nothing less. The language cited above should also be taken in context with other language found in Applicants' claim 1, notably: "receiving an event by the coordinating node requesting movement of data." The cited language from Moore et al. does **NOT** indicate that a thread is being posted. The language does **NOT** refer to a response to an event by a coordinating node (the event). The language does **NOT** refer to a request for data movement. (Here the Examiner utterly gratuitously throws in parenthetical references to "leader nodes" and other items without any justification whatsoever.)

It is furthermore noted that the cited definition of an RPC occurs in a context utterly unrelated to requests for data movement. It is merely a definition of something which happens to be a thread. Other than that, it is totally and utterly irrelevant. It is merely a definition of a particular kind of thread. It does not teach, disclose, or suggest the posting of threads nor does it teach, disclose, or suggest the posting of a particular kind of thread. It does not teach, disclose, or suggest the context or circumstances under which any particular thread is to be posted or used. Furthermore, the particular thread referred to has nothing whatsoever to do with data movement.

The cited claim element is therefore seen not to be taught by or within the grasp of the teachings found within the patent application of Moore et al. Accordingly, for this reason as well is seen that there are claim elements which are not found within the four corners of the cited patent application. It is therefore seen that and anticipation rejection cannot be sustained based upon the particular art cited. Accordingly, it is therefore very respectfully requests that the anticipation rejection of Applicants claims 1-20 be withdrawn and that the claims be passed on to early an allowance. link

Issue #3: Obviousness Rejection

Issue #3: Whether Claims 5-8 are rendered obvious under 35 USC § 103 based upon the aforementioned Moore et al. application in further review of the published patent application of Dugan et al.

Applicant's Reply #3:

Put simply, it is Applicants' position that the base patent upon which the Examiner relies fails to teach, disclose, or suggest significant aspects of the invention as set forth in claim 1. These differences have been amply described in the paragraphs above dealing with issue #2 above.

For purposes of considering the obviousness rejection, it is best to consider Applicants' claims 5 and 6 together. They are repeated below for the convenience of all.

> 5. The method of claim 1, further comprising establishing a process session in said cluster and assigning a session identifier for that session.
>
> 6. The method of claim 5, further comprising providing said session identifier to said one or more nodes to which said worker threads are posted, and **permitting only the one or more nodes having said session identifier to execute said worker thread**.

It is not enough that an Examiner is simply permitted to locate a word, such as "session," in this or that document and assert that it is: (1) the same concept; and (2) used in the same sense and connected to the other items in the claims in the same fashion. Moore et al. use the term "session" only because the DMAPI standard requires it. Furthermore, Dugan et al. use it differently. It should also be fully appreciated by the Examiner that the term "session" appears only once in the base patent upon which the Examiner relies. Furthermore, that use of the term "session" has nothing whatsoever to do with the DMAPI standard. Additionally, apart from the fact that it is used in the standard, the term "session" has no use in the cited patent application of Moore et al. The added patentable value set forth in claim 5 is that the session identifier has meaning on multiple threads running on multiple nodes. **Nothing in Moore et al. goes in that direction and Dugan has a different concept of session.**

As previously stated, the only recitations found in the cited patent to Moore et al. is found in reference to a "telnet" session. This has actually nothing whatsoever to do with a DMAPI session. While the standard may refer to a session node, there is nothing contained within the art cited which makes any reference whatsoever to "a session identifier." The notion of a session identifier only makes sense in the context set forth in Applicants' claim 6, as set forth above. It is seen that the session identifier has utilization in "permitting only the one or more nodes having

said session identifier to execute said worker thread." There is nothing contained within the cited the patent applications relied upon by the examiner that would lead one of ordinary skill in the art to employ a process in which the step shown in block 138 is carried out by a plurality of worker threads running on multiple nodes at the same time. There is but one single reference in the patent application of Moore et al. which references block 138. That reference simply states: "The DMAPI event is queued **136** and subsequently processed **138** by DMAPI **90** and HSM **88.**" **This is the beginning and ending of any and all teachings with respect to the processing of an indicated DMAPI event!**

With respect to the concept of a "session," the following is a summary of Applicants' position. The DMAPI standard refers to the concept of a session. There is, however, no concept therein relating to having multiple nodes carrying out data movement operations in parallel where in these nodes are linked by a common session identifier. The patent application of Moore et al. refers to the DMAPI standard but does not in any sense whatsoever refer to a session as that term is defined in the standard. Furthermore, the application of Dugan et al. carries with it an entirely different notion of what a session is.

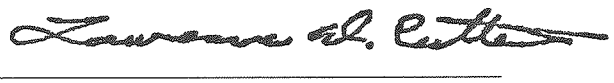
It is furthermore noted that the recitation in Applicants' claim 6 of "permitting only the one or more nodes having said session identifier to execute said worker thread" is further evidence of the implied parallel structure imparted to the claimed invention.

Accordingly, it is seen that Applicants' claims 5-8 are not in any way rendered obvious under 35 USC § 103 based upon the aforementioned Moore et al. application in further review of the published patent application of Dugan et al. It is therefore very respectfully requested that this rejection be reversed as well.

IV. Conclusion

It is therefore seen that the subject claims are clearly patentable over the art cited. For all the reasons stated above, it is seen that the rejections of Applicants' claims 1-20, as set forth above cannot be sustained. It is therefore very respectfully requested that the rejection of Applicants' claims be reversed.

RESPECTFULLY SUBMITTED



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